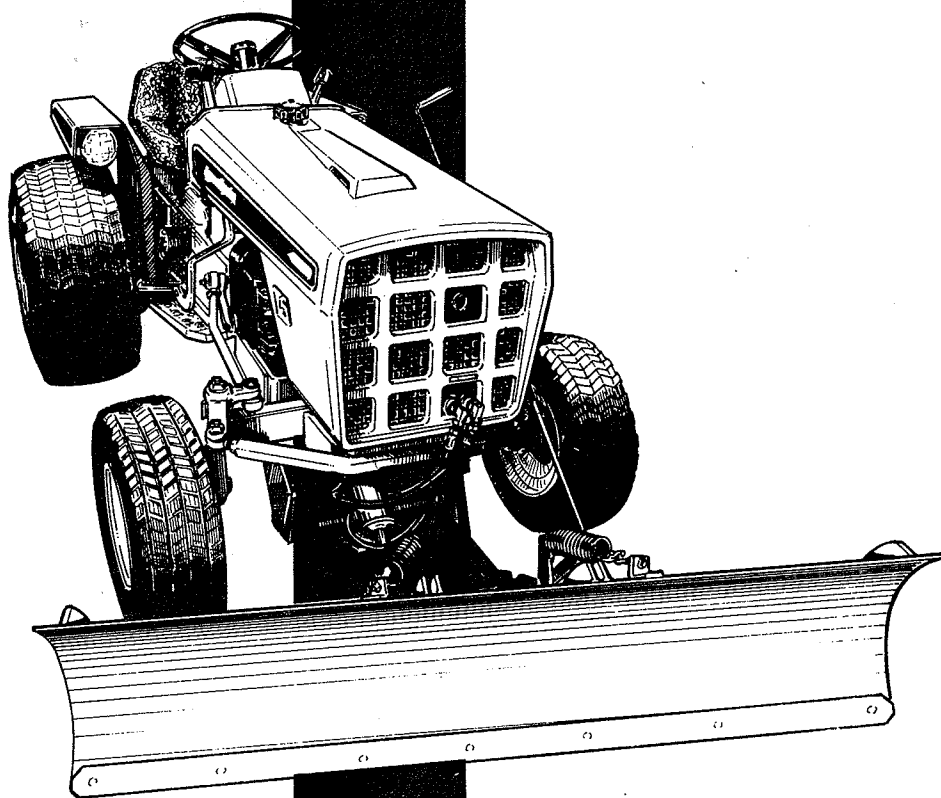


Simplicity®



OWNER'S MANUAL

**60" DOZER BLADE
MFR'S. NO. 728**

SER. FORM - 178092
PRINTED IN U.S.A.

SIMPLICITY MANUFACTURING COMPANY, INC.

1347

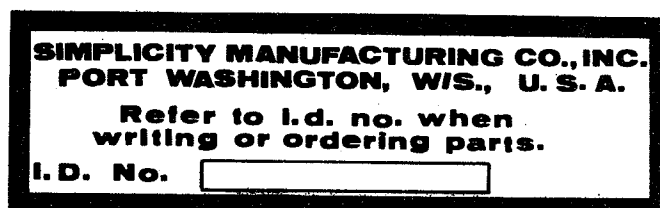
TO THE OWNER

You have made a wise choice in selecting the Simplicity 60" Snow Plow and Dozer Blade. It has been specially designed for your Simplicity tractor and constructed to give lasting superior performance.

Before attempting to operate the Snow Plow and Dozer Blade, study this manual and the manual for your tractor thoroughly. Pay special attention to the safety rules in this manual as well as the tractor owners manual. Your Simplicity equipment is designed with your safety in mind, but it is up to you to be an alert, safety conscious operator. Be sure anyone else who may operate the Snow Plow and Dozer Blade is also familiar with the operation and safety instructions.

Your Simplicity equipment requires only a minimum of care. Following the maintenance instructions carefully will assure you of maximum satisfactory service. Thank you for taking time to read this manual. The time spent will pay big dividends in the extra time saving performance you receive from your Simplicity Snow Plow and Dozer Blade.

When ordering replacement parts for the Snow Plow and Dozer Blade, be prepared to give your Simplicity dealer the identification number found on the identification plate shown below. It is located on the left side of the hitch assembly. We suggest that you locate the number and record it below for easy reference.



IDENTIFICATION PLATE

SIMPLICITY NEW EQUIPMENT WARRANTY

The Company warrants Simplicity products to be free from defects in material and workmanship, except the Company makes no warranty, express or implied, with respect to tires, engines, generators and voltage regulators, which are warranted by their respective manufacturers. Any part covered by this warranty which is proven defective within one year (6 months for equipment used for rental, municipal or commercial purposes) under normal use, from date of purchase, will be replaced without charge, provided such part is returned to the factory, (if requested), and is found to be defective upon examination at the factory. This warranty does not apply to any Simplicity products altered outside of the Simplicity factory. **THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, OR OTHERWISE.** The Company's obligation under its warranty is strictly and exclusively limited to the replacement of such parts, and in no event shall the Company be liable for any other damages, whether direct, immediate, incidental, special, or consequential. Simplicity Manufacturing Company, Inc., reserves the right to modify or change specifications without prior notification. There are no warranties which extend beyond the description of any Simplicity product.

TABLE OF CONTENTS

SIMPLICITY NEW EQUIPMENT WARRANTY	
SAFETY PRECAUTIONS	1
REQUIRED ACCESSORIES AND OPTIONS	2
RECOMMENDED ACCESSORIES AND OPTIONS	2
INSTALLATION	2
REMOVING THE SNOW PLOW AND DOZER BLADE	3
OPERATION	3
PREPARING THE SNOW PLOW AND DOZER BLADE	3
OPERATING THE SNOW PLOW AND DOZER BLADE	4
REMOVING THE HYDRAULIC CYLINDER	4
ADJUSTMENTS	5
SPRING TENSION ADJUSTMENT	5
TROUBLE SHOOTING GUIDE	5
MAINTENANCE	6
ORDERING REPLACEMENT PARTS	6
AFTER EACH USE	6
EVERY 25 HOURS	6
OUT OF SERVICE PROTECTION (STORAGE)	6
REVERSING THE BLADE WEAR PLATE	6
SPECIFICATIONS	6

SAFETY PRECAUTIONS TO PROTECT YOURSELF AND OTHERS

Read and become familiar with the owners manual for your tractor and the snow plow and dozer blade before operating the blade.

Do not allow anyone to use the snow plow and dozer blade unless they have been instructed on how to operate it safely.

Never attempt to adjust, repair, or service the snow plow and dozer blade while the tractor engine is running.

Do not allow others near the snow plow and dozer blade while it is being used.

Use the snow plow and dozer blade only in daylight, or good artificial light.

Use caution when operating on sloping surfaces.

Always lower the snow plow and dozer blade completely to the ground when leaving it unattended to prevent it from being accidentally lowered and causing injury.

Always operate the tractor at reasonable speeds, to prevent the blade from catching an object and stopping the tractor abruptly.

MFG. NO. 728-60" SNOW PLOW AND DOZER BLADE

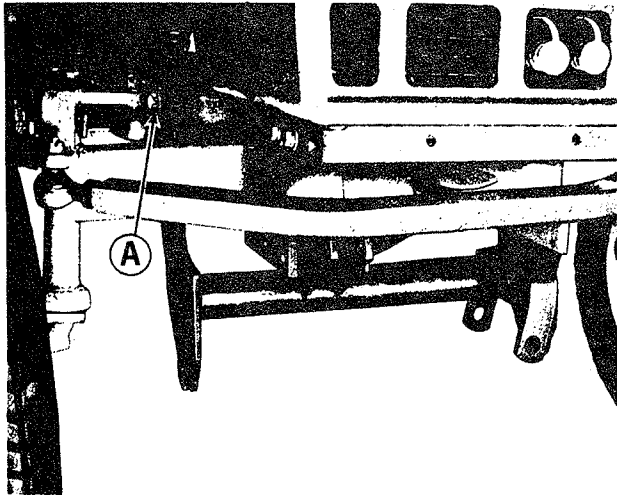


Figure 1. Hitch assembly installed on tractor.

REQUIRED ACCESSORIES AND OPTIONS

Front Hydraulic Adaptor Kit or Dual Hydraulic Option
Hitch Assembly for Front Mounted Attachment

RECOMMENDED ACCESSORIES AND OPTIONS

Rear Agricultural or High Flotation Tires
Rear Wheel Weights - Two (2) Sets
Rear Tire Chains if used on snow, ice, or other slippery surfaces.
Hydraulic Cylinder

INSTALLATION

1. See figure 1 and 2. If the hitch for front mounted attachments is not on the tractor, use eight capscrews (A) and lock washers to mount the hitch assembly. Install the control arm bracket (Item B) shown in figure 2 under the two rear capscrews and lock washers (A). Tighten the eight capscrews securely to prevent the hitch assembly from moving when the snow plow and dozer blade is being used.

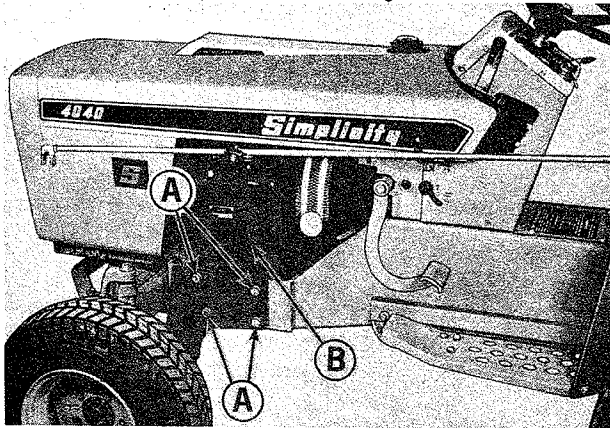


Figure 2. Angle control arm installed on tractor.

2. See figure 3. Position the snow plow and dozer blade in front of the tractor as shown.
3. See figure 4. Attach the snow plow and dozer blade to the hitch assembly as shown using two pins (A) and spring clips (B).
4. See figure 5. Attach the control arm to the snow plow and dozer blade as shown so the handle portion (A) is facing outward. Use a spring clip (B) to keep the control arm in place.

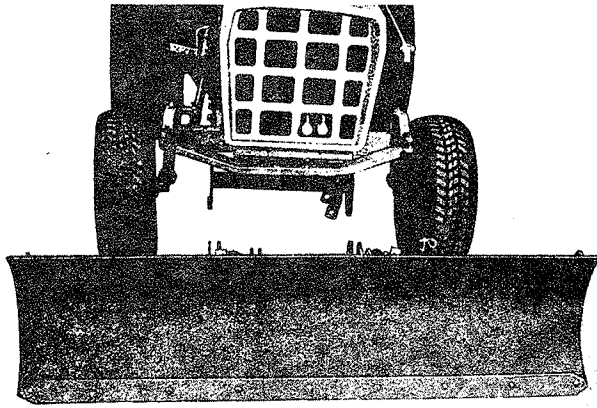


Figure 3. Blade positioned in front of tractor for mounting.

5. See figure 6. Attach the hydraulic cylinder (A) to the hitch assembly using a pin and spring clip (B). If the standard hydraulic cylinder which operates the tractor lift system is to be used, refer to page 4 for instructions on removing it.

NOTES:

Since 4041 model tractors have controls, tubing, and hydraulic cylinders installed for front attachments, it is not necessary to remove the rear cylinder for front attachment operation.

On 4040 model tractors, a front hydraulic kit (Mfg. No. 990716) may be field installed. 4040 hydraulic cylinders have quick disconnect fittings, 4041 cylinders do not.

Attach hydraulic line (C) which goes to the piston end (stationary part of the hydraulic cylinder) as shown. Attach hydraulic line (D) which goes to the rod end or moveable end of the hydraulic cylinder.

6. See figure 7. Attach the rod end of the hydraulic cylinder to the grader blade at (A) using a pin and spring clip. It may be helpful in doing this to extend the rod end of the hydraulic

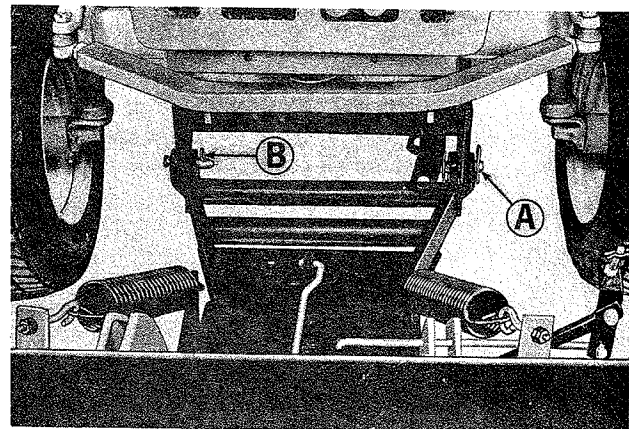


Figure 4. Snow plow and dozer blade attached to hitch.

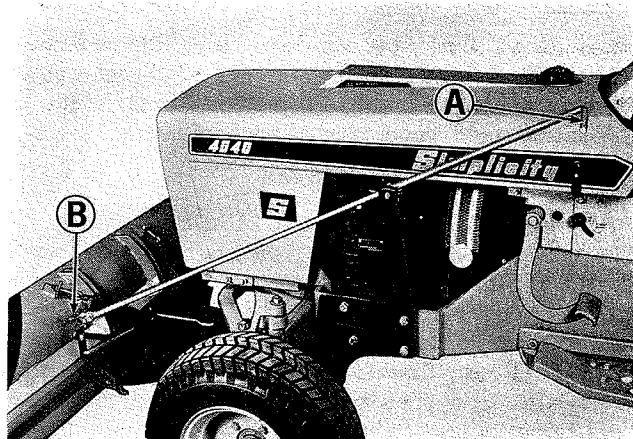


Figure 5. Angle control arm installed.

lic cylinder by moving the tractor hydraulic lift lever to the lower position while the tractor engine is idling. **CAUTION: DO NOT START THE TRACTOR ENGINE WITHOUT AN OPERATOR IN THE TRACTOR SEAT.**

REMOVING THE SNOW PLOW AND DOZER BLADE

CAUTION: BEFORE ATTEMPTING TO REMOVE THE SNOW PLOW AND DOZER BLADE BE SURE THAT THE TRACTOR ENGINE IS SHUT OFF, THE PARKING BRAKE SET, AND THE BLADE IS RESTING ON THE GROUND.

1. Position the tractor so it, and the snow plow and dozer blade are on a level surface. Shut off the tractor engine and set the parking brake.
2. Push the tractor hydraulic control lever forward to the **FLOAT** position.
3. See figure 7. Disconnect the rod end of the hydraulic cylinder from the snow plow and dozer blade by removing the pin and spring clip at (A).
4. See figure 6. Remove the hydraulic cylinder by disconnecting the hydraulic hoses at (C) and (D) and removing the pin and spring clip at (B).
5. See figure 5. Disconnect the control arm from the snow plow and dozer blade by removing the spring clip (B).
6. See figure 4. Remove the two spring clips (B), and pins (A). The tractor can be backed away from the snow plow and dozer blade and used with another front mounted attachment, such as the snow thrower, or for jobs not requiring full ground clearance. If the tractor is to be used for jobs requiring full ground clearance, or with a mid-mounted attachment perform step 7.
7. See figures 1 and 2. Remove the eight capscrews (A) and remove the hitch for front mounted attachments from the tractor.

OPERATION

PREPARING THE SNOW PLOW AND DOZER BLADE DO THE FOLLOWING

1. Read this manual and the owners manual for the tractor carefully. Be sure you are familiar with the safety precau-

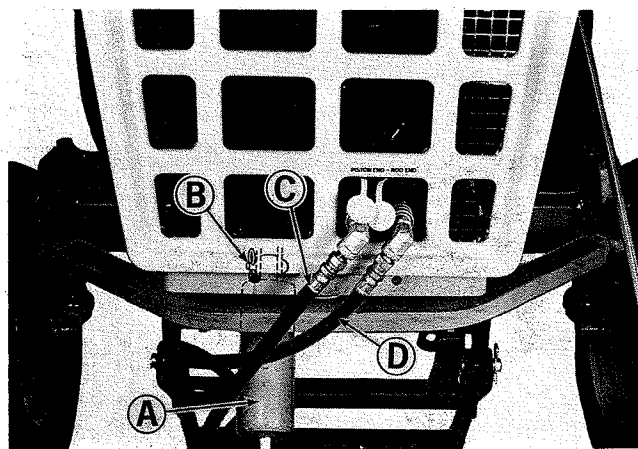


Figure 6. Hydraulic cylinder installed.

tions, controls and operating instructions.

2. Check the snow plow and dozer blade carefully to be sure it is properly installed and the eight capscrews Item A in Figure 1 and 2 are securely tightened.
3. Lubricate the snow plow and dozer blade according to the maintenance instructions on page 6.
4. Remove from the work area or mark clearly any objects which may be caught by the snow plow and dozer blade.

SKID SHOE ADJUSTMENT

See figure 11. An adjustable skid shoe (A) is provided at each end of the 60" snow plow and dozer blade. These skid shoes can be easily adjusted by placing a block under the blade and loosening slightly the two capscrews (B). Skid shoes can be moved up or down in the slotted mounting holes to obtain the desired height. Both skid shoes should be adjusted to approximately the same position.

The skid shoes should be adjusted all the way up as shown in figure 11 when operating on smooth hard surfaces, where it is not likely to strike a solid object or when it is desirable to dig a ground or gravel surface. The skid shoes should be lowered to hold the grader blade above the ground surface when grading gravel driveways or rough areas where the blade might catch solid objects. Tighten capscrews (B) securely after making any adjustments.

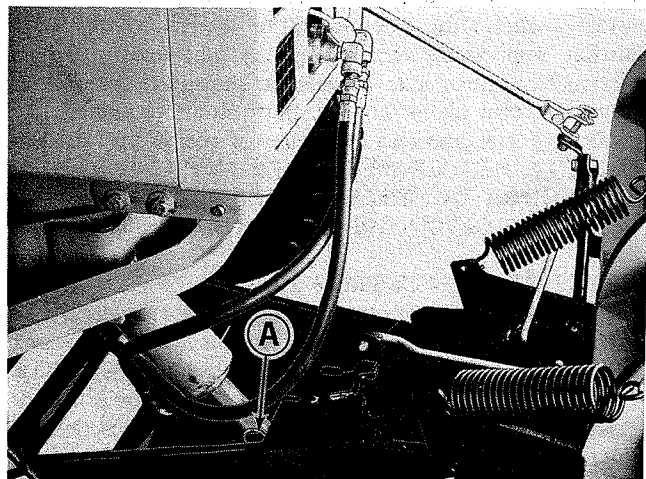


Figure 7. Hydraulic cylinder attached to blade.

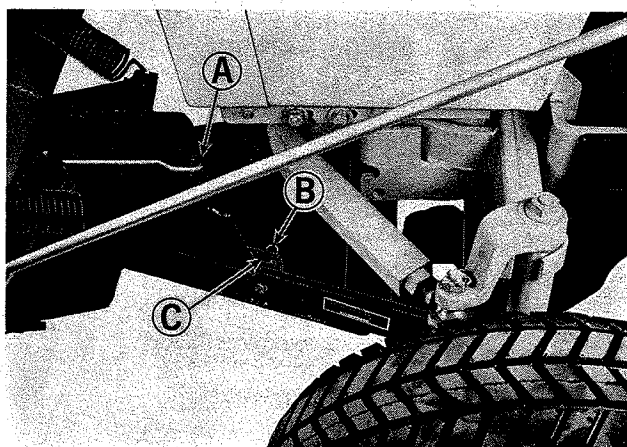


Figure 8. Hitch seen from the right side.

BLADE ANGLE

The Simplicity snow plow and dozer blade can be operated at any of five angular positions. See figure 8. Lock (A) is shown in the center notch which holds the blade perpendicular to the tractor frame. If the blade is locked in either of the two notches to the right of lock (A) the blade will be angled 15° or 30° to the right. The notches to the left of lock (A) can be used to angle the blade 15° or 30° to the left. The blade angles can be changed from the tractor seat by using the control arm (Figure 5, item A). Raise the snow plow and dozer blade so it is not resting on the ground surface. Use your left hand to grasp the control handle at (A) and rotate the handle clockwise. While holding the control handle clockwise, push it forward to angle the blade to the right, or pull it to the rear to angle the blade to the left. Allow the control arm to rotate counter-clockwise and move it slightly forward or back until the locking arm (Figure 8, item A) locks in the desired notch.

OPERATING THE SNOW PLOW AND DOZER BLADE

TRANSPORTING THE BLADE

When transporting the snow plow and dozer blade, the blade should be in the straight ahead position to allow maximum clearance between the blade and the ground surface. The snow plow and dozer blade should be transported in the full raised position. Any combination of the three range transmission, hydrostatic transmission control lever and the engine speed control may be used in transporting the snow plow and dozer blade. Ground speed should be adjusted according to the type and condition of the ground surface. **CAUTION: REDUCE SPEED OVER ANY AREAS WHICH ARE ROUGH OR WHERE THERE ARE OBSTACLES WHICH MAY CATCH THE BLADE.**

SELECTING TRANSMISSION GEAR

The tractor three range transmission can be placed in second gear for most operating conditions, and the hydrostatic transmission control lever used to regulate ground speed. When pushing heavy loads a large percentage of the time, it may be desirable to use first gear. The tractor will be slightly more efficient and it is easy to maintain a uniform slow ground speed.

ENGINE SPEED

The engine should be operated at one half to full speed

when using a snow plow and dozer blade. If small amounts of material are being pushed not requiring full engine power, operating the engine at one half speed may be sufficient. Use full engine speed where large amounts of material are being moved and full engine power is required.

RAISING AND LOWERING THE BLADE

The snow plow and dozer blade should be raised and lowered by using the tractor hydraulic control lever. Pull back on the lever and hold it in the **RAISE** position to lift the snow plow and dozer blade. Lower the blade by pushing the hydraulic lift control lever forward to the **FLOAT** position. Down pressure may be applied to the blade by pushing the hydraulic lift control lever forward to the **LOWER** position until the desired amount of down pressure is applied to the blade. Release the lift control lever and it will automatically return to the hold position, locking the blade in place. When scraping a surface or grading it is normally desirable to operate the blade in the float position, and let the skid shoes determine the height of the blade above the surface. Operated in this manner, the blade will be free to follow the contour of the ground surface. The blade may be operated above the ground surface simply by raising it to the desired height, and releasing the hydraulic lift control lever.

CONTROLLING GROUND SPEED

Ground speed can be easily and quickly controlled by using the tractor hydrostatic transmission control lever. The best ground speed will vary greatly with the type of terrain and the amount and type of material being moved. For most conditions, 2-3 MPH will be a good starting speed. Refer to the operation chart in the operation section of the 4040 tractor owners manual for approximate control settings to achieve these speeds. **CAUTION: BE PARTICULARLY CAREFUL AND OPERATE AT A LOW GROUND SPEED IN ANY AREA WHERE THE BLADE MAY CATCH SOLID OBJECTS WHICH WILL CAUSE THE TRACTOR TO BE JARRED OR COME TO AN ABRUPT STOP.**

OPERATING PATTERN

Before beginning to use the snow plow and dozer blade in any area the operator should determine the best operating pattern. The size, shape, terrain, and obstructions of the area to be worked in should be considered. The type and amount of materials to be moved are also important. When working in a large area, and the amount of material being moved is small it is usually best to work the long direction of the area from end to end. It is often desirable to go forward a short distance, then back up and take another pass. This can be easily done using the hydrostatic transmission control lever to change speed, and reverse direction. This method is especially useful when filling a trench or ditch with dirt which was removed from it.

REMOVING THE HYDRAULIC CYLINDER FROM THE SNOW PLOW & DOZER BLADE

Since the same hydraulic cylinder which operates the tractor lift system and the three point hitch, if the tractor is so equipped, is used to operate the snow plow and dozer blade, provision has been made to hold the snow plow and dozer blade in the raised position so the hydraulic cylinder can be used to operate the three point hitch while the snow plow and dozer blade is still mounted. The three point hitch can also be held in the raised position while the hydraulic cylinder

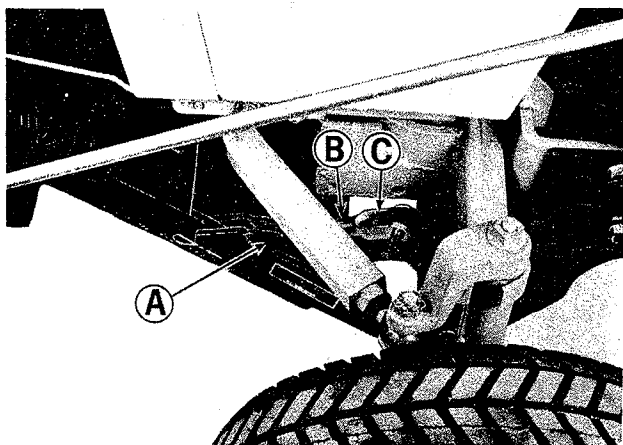


Figure 9. Transport rod assembly installed.

is being removed from it so attachments such as the rotary tiller can remain mounted while the hydraulic cylinder is used on a front mounted attachment. Proceed as follows to remove the hydraulic cylinder.

1. See figure 8. Remove spring clip (B) and remove rod assembly (C) from its storage location.
2. Use the tractor hydraulic lift system to raise the snow plow and dozer blade to its full raised position. Shut off the tractor engine.
3. See figure 9. Use two pins and spring clips to attach the rod assembly (A) to the snow plow and dozer blade and front hitch assembly as shown. The length of the rod assembly can be adjusted by loosening the locking nut (B) and turning the yoke (C) as necessary so the holes will line up and the pins can be easily inserted. Tighten the locking nut against the yoke after any adjustment has been made.
4. Push the tractor hydraulic lift control lever forward to the float position. The blade will remain in the transport position.

5. See figure 6. Remove the spring clip and pin at (B) to release the hydraulic cylinder from the front hitch assembly.
6. See figure 7. Remove the spring clip and pin at (A) to release the hydraulic cylinder from the snow plow and dozer blade hitch.
7. See figure 6. Disconnect the hydraulic lines from the tractor by releasing the couplings at (C) & (D). The hydraulic cylinder can now be removed for use in controlling a rear mounted attachment.

FROM THE CENTER AND REAR LIFT SYSTEM

If the hydraulic cylinder must be removed with an attachment mounted to the three point hitch, see the owners manual for that attachment for instructions on removing the hydraulic cylinder. If no attachment is mounted, proceed as follows:

1. Extend the rod end of the hydraulic cylinder by pulling the tractor hydraulic lift lever to the **RAISE** position. Shut off the tractor engine.
2. See figure 10. Remove the spring clips and pins at (A) & (B).
3. Disconnect the hydraulic cylinder lines from the tractor and remove the hydraulic cylinder from the tractor. The hydraulic cylinder can now be used for controlling the snow plow and dozer blade.

ADJUSTMENTS

SPRING TENSION ADJUSTMENT

1. See figure 11. The Simplicity snow plow and dozer blade is spring loaded so when the blade strikes a solid object, the springs will allow the blade to release rather than cause damage to it. The spring tension can be adjusted by loosening the locking nuts at (C) and turning them clockwise to place more tension on the blade so it will not release as easily or counter-clockwise to give the springs less tension and allow the blade to release more easily.
2. After making any adjustment of spring tension, be sure

TROUBLE SHOOTING GUIDE

PROBLEM OR SYMPTOM	POSSIBLE CAUSES	CHECKS AND CORRECTIONS
Blade does not clean surface thoroughly.	Skid shoes not adjusted properly.	Adjust skid shoes. See page 3.
	Material to be graded is hard.	Use hydraulic lift system to put down pressure on blade.
Blade cuts too deep or tears asphalt.	Skid shoes raised too high.	Lower skid shoes. See page 3.
	Too much down pressure on blade.	Operate blade in float position.
Tractor does not have sufficient traction.	Not correct rear tires.	Use Agricultural or high flotation tires.
	Not enough weight on tractor.	Use two (2) sets of rear wheel weights and/or fluid in tires.
	Tire chains not installed.	Use tire chains on slippery surfaces.
Tractor handles poorly.	Tires not properly inflated.	Inflate tires according to tractor owners manual.
	Traveling too fast on rough or sloping surfaces.	Reduce travel speed.

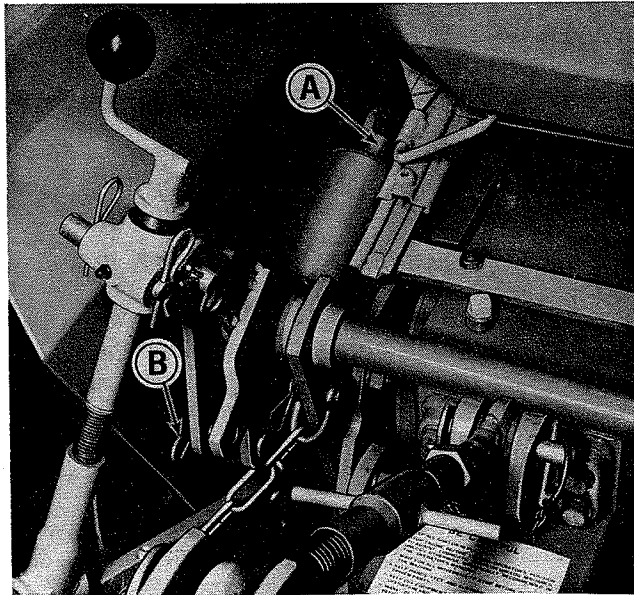


Figure 10. Removing the hydraulic cylinder.

to tighten the two nuts at (C) against each other securely to prevent them from coming loose.

MAINTENANCE

ORDERING REPLACEMENT PARTS

Replacement parts required for performing maintenance services or repair work should be purchased from your Simplicity dealer. When ordering parts, be prepared to give him the identification number of your snow plow and dozer blade. If you have not already recorded this number on the inside front cover of this manual, we suggest that you do so now for convenient future reference.

AFTER EACH USE

Inspect the snow plow and dozer blade thoroughly looking for any loose or missing bolts, pins or spring clips, or worn or damaged parts. Clean or repair the snow plow and dozer blade as needed to insure it is ready to use the next time you need it.

EVERY 25 HOURS

See figure 11. Coat the hitch assembly at (D) with a film of grease to help reduce wear, and make angling the blade easier. Place a coat of grease or a few drops of engine oil on the control arm pivots at (E) to make it easier to operate.

See figure 4. Place a coating of grease on the pins on (A) and (B) to help reduce wear.

OUT OF SERVICE PROTECTION (STORAGE)

1. Remove the snow plow and dozer blade from the tractor. See page 3.
2. Use water under pressure and a brush to thoroughly clean

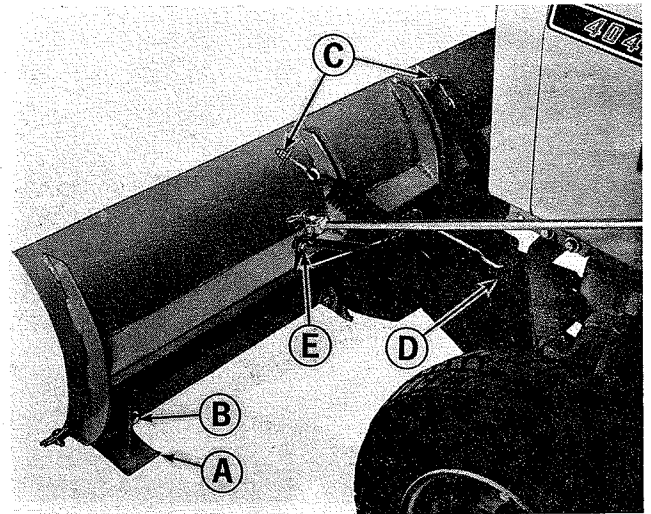


Figure 11. Left rear corner of blade.

the snow plow and dozer blade of any buildup of dirt or other material.

3. Cover any area where paint has been worn or chipped away with paint or a light coat of oil.
4. Lubricate the snow plow and dozer blade according to the Every 25 Hour Maintenance Service.
5. Store the snow plow and dozer blade in a dry place.

REVERSING THE BLADE WEAR PLATE

See figure 12. After considerable use, the lower portion of the blade wear plate may become worn. The life of the blade edge can be doubled by reversing the wear plate.

1. See figure 12. Remove the nine carriage bolts (B) which hold the wear plate (A) to the blade.
2. Remove wear plate (A) and turn it end for end, that is, put the left end of the wear plate at the right end of the blade.
3. Install the wear plate so the unused upper edge is now at the bottom. Replace the nine carriage bolts and tighten the nuts securely.

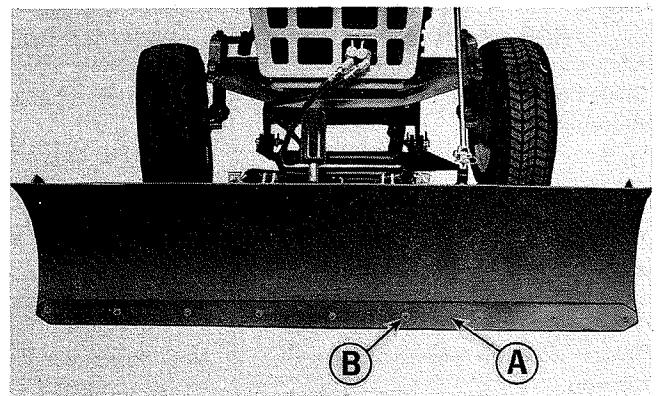


Figure 12. Front view of blade.

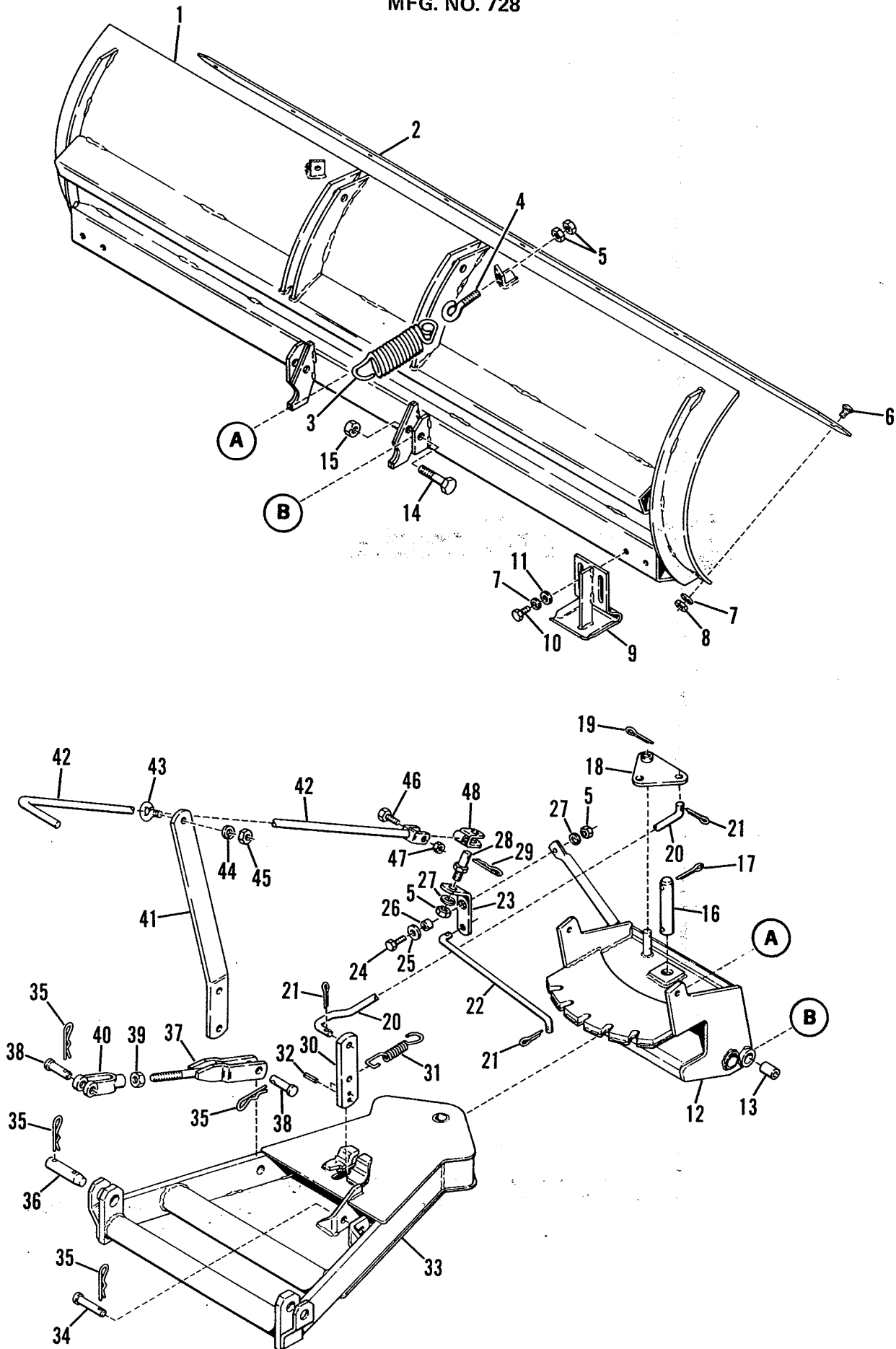
SPECIFICATIONS

Effective Width	60"
Blade Mounting	Spring Break Away
Angle Position	Zero Degrees and 15° and 30° left and right.
Wear Plate	Reversible and replaceable.
Lift System	Tractor Hydraulic Lift Control
Approximate Weight	170 Pounds

Simplicity[®]

MFG. NO. 728 60" DOZER BLADE PARTS CATALOG
MFG. NO. 738 HITCH ASSEMBLY FOR 728 BLADE PARTS CATALOG

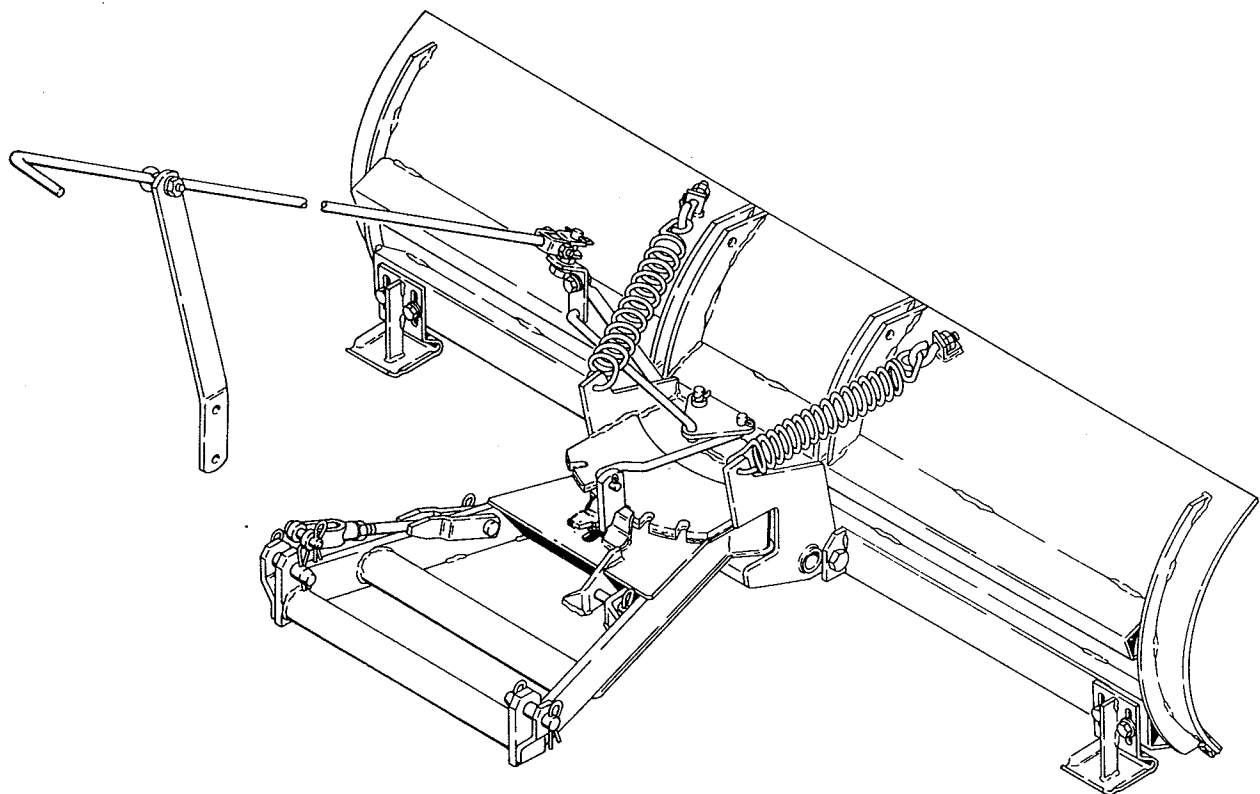
60" DOZER BLADE
MFG. NO. 728

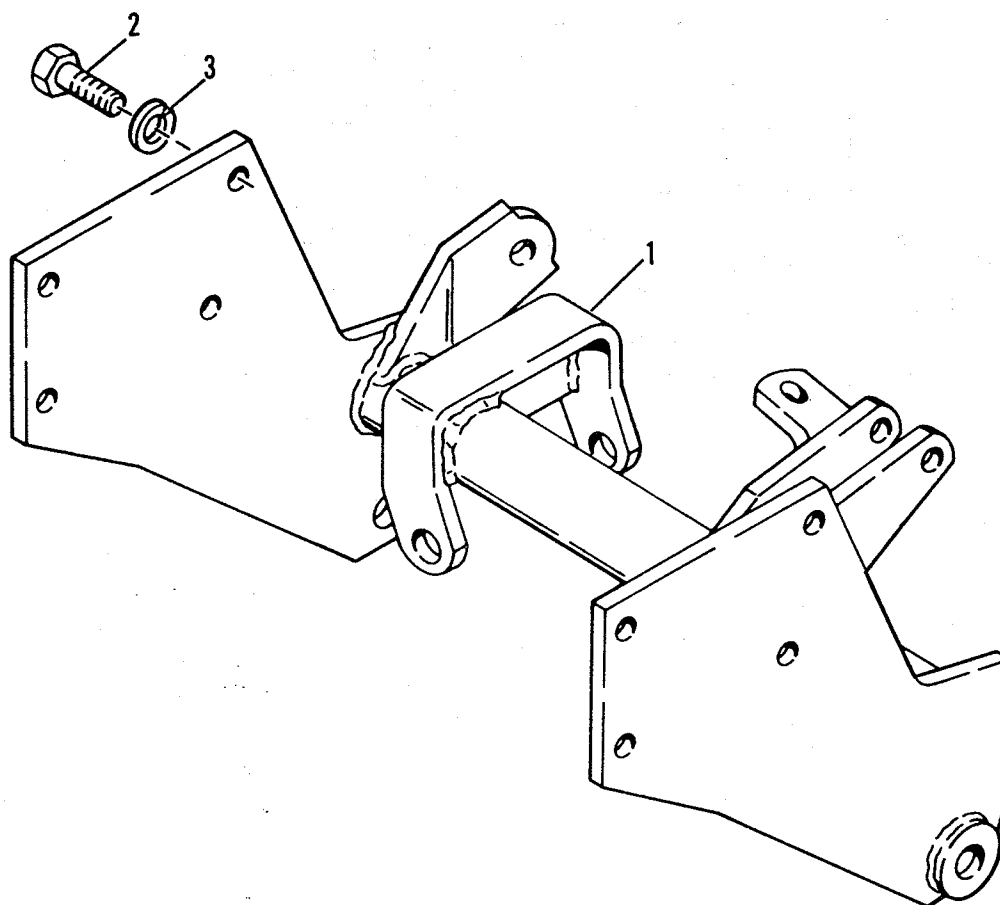


**60" DOZER BLADE
MFG. NO. 728**

Ref. No.	Part No.	Qty. Req.	Description
1	173355	1	Blade Assembly
2	173428	1	Wear Plate
3	101126	2	Tension Spring
4	107121	2	Eyebolt
5	717001	6	Hex Nut, Full, 5/16" - 18
6	702002	9	Carriage Bolt, 3/8" - 16 x 1" lg.
7	720002	13	Lock Washer, 3/8"
8	717003	9	Hex Nut, Full, 3/8" - 16
9	107106	2	Shoe Assembly
10	705004	4	Hex Capscrew, 3/8" - 16 x 3/4" lg.
11	719001	4	Flat Washer, 3/8"
12	173343	1	Pivot Frame Assembly
13	174061	2	Spacer
14	715159	2	Hex Capscrew
15	717518	2	Hex Nut, Full, 1/2" - 13
16	173571	1	Pivot Pin
17	722003	2	Cotter Pin, 3/16" x 1-1/4" lg.
18	107116	1	Pivot Plate Assembly
19	722006	2	Cotter Pin, 1/8" x 1" lg.
20	173348	1	Latch Rod
21	722016	4	Cotter Pin, 3/32" x 5/8" lg.
22	173663	1	Pivot Rod
23	107119	1	Pivot Arm

Ref. No.	Part No.	Qty. Req.	Description
24	705007	1	Hex Capscrew, 5/16" - 18 x 1" lg.
25	719002	1	Flat Washer, 5/16"
26	156150	1	Spacer
27	720001	2	Lock Washer, 5/16"
28	107120	1	Pivot Stud
29	8161045	1	Spring Clip
30	173347	1	Latch
31	107135	1	Spring
32	723002	2	Roll Pin, 7/32" x 1" lg.
33	173314	1	Frame Assembly
34	8181008	2	King Pin
35	106788	6	Hair Pin Clip
36	173741	2	Hitch Pin
37	174778	1	Rod Assembly
38	157194	2	Pin
39	717016	1	Hex Jam Nut, 1/2" - 20
40	157631	1	Yoke
41	174246	1	Support
42	173568	1	Handle Assembly
43	172162	1	Eyebolt
44	720003	1	Lock Washer, 1/4"
45	717005	1	Hex Nut, Full, 1/4" - 20
46	705018	1	Hex Capscrew, 5/16" - 18 x 1-1/2" lg.
47	717511	1	Hex Nut, Full, 5/16" - 18
48	106131	1	Fork Assembly





HITCH SUPPORT ASSEMBLY
(Front Mounted)
MFG. NO. 738

Ref. No.	Part No.	Qty. Req.	Description
1	173625	1	Hitch Support Assembly
2	715163	8	Hex Capscrew, 1/2" - 13 x 1-1/4"lg.
3	720004	8	Lockwasher, 1/2"

